

**SUMMARY FOR FE-10-02**  
**SELECTED AND POSSIBLE CONTRIBUTING FACTORS**

**SELECTED FACTORS**

**Railroad:** Southeastern Pennsylvania Transportation Authority

**Location:** Trevose, Pennsylvania

**Region:** 2

**Month:** March

**Date:** March 28, 2002

**Time:** 2:36 a.m., EST

**Data for Fatally Injured Employee(s)**

Overhead Maintainer, First Class/Lead Maintainer

36 years old

13 years of service

Last rules training: Feb. 26, 2002

Last safety training: Feb. 26, 2002

Last physical: Dec. 27, 1988

**Data for All Employees (Craft, Positions, Activity)**

**Craft: Maintenance of Way**

**Positions:**

**Electric Traction (ET) Work Crew (Third Shift)**

Employee-in-Charge (also Lineman, Third Class)

Lead Maintainer (also Overhead Maintainer, First Class)

Another Overhead Maintainer, First Class

Overhead Maintainer, Second Class

Headquarters Supervisor

SEPTA Wind Tower Operator

SEPTA "A" Desk Dispatcher at the Regional Rail Operations Center

Power Dispatcher at Wayne Junction, Philadelphia, PA

**Freight Train Q190-27**

Engineer

Conductor

## **SUMMARY FOR FE-10-02 CONTINUED**

### **SELECTED FACTORS CONTINUED**

#### **Activities**

The ET Work Crew was continuing a project they had started on March 24, 2002, removing a sectionalizing switch from a catenary pole.

#### **EVENT**

The Lead Maintainer was seriously injured from head trauma when struck by a passing train, dying two hours later.

### **POSSIBLE CONTRIBUTING FACTORS**

#### **PCF No. 1**

FRA's investigation revealed that the ET employees did not sign SEPTA's form, acknowledging that they had received a briefing. Neither did they acknowledge an understanding of the on-track safety procedures to be used on the night of the incident. The EIC confirmed that a briefing had not been conducted, in non-compliance with Federal regulations.

#### **PCF No. 2**

FRA's investigators determined that the EIC failed to obtain foul time properly for the ET Work Group, in non-compliance with Federal regulations and NORAC Operating Rule 140. According to the Roadway Worker Manual, requirements for securing foul time include listing track designation, track limits, and time limits requested; repeating the request; and receiving confirmation from the issuing authority before implementing foul time. The request did not include the three specific elements above, which therefore could not be confirmed.

#### **PCF No. 3**

FRA's investigation revealed that the EIC failed to comply with Federal regulations governing radio procedures for ending transmissions.

#### **PCF No. 4**

FRA's investigation revealed that SEPTA only required a recorded examination as a method of qualifying a roadway worker to become an EIC. The EIC stated that he never received field training by a supervisor, nor did he demonstrate an understanding of the duties of an EIC.

## **SUMMARY FOR FE-10-02 CONTINUED**

### **POSSIBLE CONTRIBUTING FACTORS CONTINUED**

#### **PCF No. 5**

The investigation revealed the compliance testing program placed little emphasis on Roadway Worker Protection/On-Track Safety (RWP/OTS). The four employees directly involved in the incident had been observed 18 times in a 15-month period from January 2001 through March 2002, with only three observations regarding RWP/OTS rules. All were recorded as in compliance. The EIC was observed only three times in the 15-month period; he never received observation for radio procedures or RWP/OTS.

#### **PCF No. 6**

The investigation revealed the Lineman's inexperience with an important function of an EIC; during his one year in this role, he had obtained foul time only four times.

**REPORT:** FE-10-2002

**RAILROAD:** Southeastern Pennsylvania Transportation Authority (SEPTA)

**LOCATION:** Trevose, Pennsylvania

**DATE & TIME:** March 28, 2002; 2:36 a.m., EST

**EVENT<sup>1</sup>:** The Lead Maintainer was seriously injured from head trauma when struck by a passing train, dying two hours later.

**EMPLOYEE:**

Craft:	Maintenance of Way (MOW)
Activity:	Removing a sectionalizing switch from a catenary pole
Occupation:	Overhead Maintainer, First Class/Lead Maintainer
Age:	36 years
Length of Service:	13 years
Last Rules Training:	Feb. 26, 2002
Last Safety Training:	Feb. 26, 2002
Last Physical:	Dec. 27, 1988

### **CIRCUMSTANCES PRIOR TO THE ACCIDENT**

The Electric Traction (ET) Work Crew comprised one Lineman, Third Class, who was also the Employee in Charge (EIC), two Overhead Maintainers, First Class, one of which was the Lead Maintainer, and one Overhead Maintainer, Second Class. They all reported to Wayne Junction headquarters in Philadelphia, Pennsylvania prior to the start of the third shift (11 p.m. to 7 a.m.). The Supervisor at the headquarters gave the work assignment at approximately 11:30 a.m. The work assignment for the shift was to continue removing the J62 sectionalizing switch from catenary pole No. 21/9. This same crew had previously worked this project twice, on March 24 and 25, 2002.

The 4-man crew left the headquarters for the work site in two vehicles. Utility truck No. 216 was occupied by the EIC and the Overhead Maintainer, Second Class. The second vehicle, a hi-rail bucket truck No. OPS4022, was occupied by the Overhead Maintainer, First Class, and the Lead Maintainer. The crew had arranged to meet at Langhorne Train Station, on Bellevue Ave, Langhorne, Pennsylvania, at milepost 23.90, north of the work site, to set the hi-rail truck on the track.

At approximately 12:40 a.m., the crew met at the Langhorne Train Station, and the EIC called the Dispatcher to ask permission to take SEPTA Track No. 2 out of service from CP Wood to Jenkin Interlocking. Permission was granted by NORAC Form-D No. 50006, effective 12:49 a.m. The EIC instructed the Overhead Maintainer, First Class, and the Lead Maintainer occupying truck No. OPS4022 to set the truck on Track No. 2 and proceed south to the work location at milepost 21.38. At 1:07 a.m., the EIC received power permit No. 331 to remove the electric traction power from Tracks Nos. 1 and 2 between CP Wood and Neshaminy Interlocking. The EIC and the Overhead Maintainer, Second Class, proceeded to the work site in the truck No. 216 via the highway and parked the truck on the right of way next to Track No. 1, adjacent to the work site.

After arriving at the work site with the hi-rail bucket truck occupying Track No. 2 facing south, The Overhead Maintainer, First Class, and Lead Maintainer went up in the bucket to the catenary structure. The EIC and the Overhead Maintainer, Second Class, remained on the ground as ground hands. The Overhead Maintainer, First Class, and Lead Maintainer in the bucket were dismantling the J62 switch location, removing the mechanical switch, and operating pipeline. During the procedure, it became necessary to reach further with the bucket to complete the removal of the pipeline, which would require foul time on the CSX single track. The Overhead Maintainer, First Class exited the bucket climbing onto the catenary structure and told the Lead Maintainer in the bucket to ask the EIC to get foul time on the CSX track. While waiting for permission to foul the CSX single track, the Overhead Maintainer on the structure continued to cut the operating pipeline free and hand it to the Lead Maintainer in the bucket remaining clear of the CSX single track.

The EIC called the operator at the SEPTA Wind Tower for permission to foul the CSX single track and was referred to the SEPTA "A" Desk Dispatcher at the Regional Rail Operations Center (RROC). The SEPTA "A" Desk Dispatcher received the request to foul the CSX single track from the EIC via phone and informed him he would call CSX and get back to him on the radio. The "A" Desk Dispatcher then contacted the Operator at Wind Tower, asking about the location of Freight Train Q190 and told him to contact the EIC via radio and tell him there was a south bound freight train heading towards him. The Operator at Wind Tower then contacted the EIC via radio to inform him of the southbound freight train. The EIC responded "ROGER" to the information from the Operator at Wind Tower on the radio and wrote on the power permit form "Received at 2:24." The EIC notified the Overhead Maintainer, Second Class, and the Lead Maintainer in the bucket that permission had been received to foul the CSX track.

The Lead Maintainer in the bucket operated the bucket east across the CSX single track and next to the catenary structure. The Overhead Maintainer, First Class, on the catenary structure and the

Lead Maintainer in the bucket proceeded to remove the operating pipeline from the vertical part of the catenary structure.

The accident site comprised an elevated railroad approximately 80 feet above the surrounding area. Located at the south end of a bridge over the Neshaminy Creek containing three parallel tracks, the CSX single track posted at 50 mph, SEPTA Tracks No. 1 and No. 2 both posted at 70 mph for passenger trains and 40 mph for freight trains. The ground surface was stone ballast. Overhead electric traction wires directly above Tracks No. 1 and No. 2 were energized at 13,000 volts AC. The electric traction wires were suspended from a horizontal steel member supported by two steel vertical structures imbedded in the ground on the outside of the tracks. The Neshaminy Falls Passenger Train station was approximately 300 feet south of the work site and illuminated with street and parking lot lights. There was a creek bed with trees on the east side and mature woods on the west side. The site was a semi-isolated location in the suburbs of Philadelphia. The hi-rail vehicle No. OPS4022 was illuminated with spotlights, two yellow rotary beacons, one on each side at the center of the vehicle. The vehicle also displayed one yellow strobe light bar on the front and one yellow hazard light bar on the rear.

The weather on the morning of March 28, 2002 was 40° F, with clear skies.

### **THE ACCIDENT**

The Overhead Maintainer, Second Class, who was working as the ground hand, observed a train heading south towards the work site and informed the EIC. The EIC excitedly called the Operator at Wind Tower on the radio. Prior to receiving an answer from Wind Tower, the EIC and the Overhead Maintainer on the ground started yelling to the Lead Maintainer, who was elevated in the bucket, to move out of the way of the approaching train. The Lead Maintainer in the bucket proceeded to move the bucket from the path of the approaching train on the CSX track.

As CSX Freight Train Q190-27 approached at 48 mph, the *Engineer* observed an illuminated work site ahead of him and sounded the horn as a warning. As the train neared the work site, the Engineer observed equipment fouling the track he was on and initiated an emergency break application. Both the Engineer and Conductor dove to the floor of the cab.

At approximately 2:36 a.m., the train struck the bucket occupied by the Lead Maintainer, impacting the right side of the Engineer's windshield on Engine No. 8739. The victim was ejected from the bucket, and came to rest near the driver's side rear tire between the CSX single track and the SEPTA Track No. 2.

The Engine No. 8739 came to a complete stop approximately 1,700 feet south of the impact point with the rear of the train approximately 480 feet south of the impact point. The Engineer of CSX Train Q190-27 transmitted an emergency radio message to the CSX "NI" Dispatcher located in Albany, New York, informing the Dispatcher of the accident.

The Overhead Maintainer, First Class, on the catenary structure contacted 911 via cell phone. The EIC contacted the Power Dispatcher located at Wayne Junction, Philadelphia, Pennsylvania to inform him of the accident. The EIC was involved in multiple phone calls with supervisors

concerning the accident. Officers from the Bensalem Township Police Department arrived at the scene. The officers took a statement from the Overhead Maintainer, First Class, who was stationed on the catenary structure at the time of the impact. Bensalem Township emergency medical personnel arrived at the scene, followed by two SEPTA police officers. Also representing SEPTA at the accident scene were the Director of Systems Safety, Investigator Systems Safety, Line Director, and Deputy Line Director.

The victim sustained sufficient trauma to the head to preclude any attempt to revive or sustain life. The coroner pronounced the victim dead at the scene at 4:45 a.m. on March 28, 2002.

## **POST-ACCIDENT INVESTIGATION**

### **Accident Site**

The FRA inspection of the site revealed no unusual or contributing factors to the accident. The railroad terrain is level with an unobstructed view of approximately 3,800 feet to the point of impact for a southward moving train.

### **Bucket Truck No. OPS4022**

The FRA inspection of the vehicle No. OPS4022 revealed no unusual or contributing factors to the accident. The vehicle was new and in service in October 2001. The vehicle was assigned to the same ET crew since January 2002, and they had been trained on its use. The training session was conducted by the contractor supplying the truck on March 5, 2002 and consisted of hands-on experience utilizing the vehicle at the Wayne Junction facility.

### **CSX Engine No. 8739**

The FRA Inspection of the CSX Engine No. 8739 revealed no contributing factors to the accident. Review of the data from the event recorder on the engine revealed no remarkable events. The Engineer appeared alert and in control of the train responding to previous highway grade crossings, sounding the horn. The Engineer maintained the posted speed for the track on which he was operating. The Engineer responded to the train inspection device (hot box detector: HBD) at milepost 24.00, properly repeating the message transmitted by the HBD. The Engineer approached the illuminated work-site, sounding the horn approximately 2,200 feet prior to reaching it. The Engineer initiated an emergency break application approximately 250 feet prior to the point of impact.

### **Manuals/Rules**

FRA conducted a review of SEPTA Roadway Workers Protection (RWP) Manual SRW-1, NORAC Operating Rules, and SEPTA Safety Rules S7-C. FRA conducted interviews and reviewed recorded tapes of radio conversations for compliance with Federal and SEPTA rules.

The RWP manual covers the duties of the EIC. It mandates job briefings and the signing of SEPTA form F-1454 by all employees participating in the job briefing. In an additional rule on

job briefings, it specifies a job briefing is not complete until all employees acknowledge and understand the on-track protection procedures being used. The job briefing is also a requirement of the NORAC Operating Rules. The FRA investigation revealed that the ET employees did not sign the SEPTA form F-1454, nor did they acknowledge an understanding of the on-track safety procedures used on the night of the accident. In the FRA interview on May 15, 2002, the EIC stated that a job briefing was not conducted, and this constitutes non-compliance with 49 CFR Part 214.315.

The roadway worker manual covers the requirements of securing foul time, listing the three elements necessary, track designation, track limits, and time limits, and the requirement to repeat this permission and be confirmed by the issuing authority before foul time is effective. It also refers the employee to Norac Operating Rule 140 that states the same information. FRA's investigators determined that the EIC had failed to properly obtain foul time for the ET work group. This constitutes non compliance with 49 CFR Part 214.335.

The NORAC Operating Rules, in addition to covering the requirements for foul time and job briefings, also mandates proper radio/telephone procedures. The radio/telephone procedures under Rule 705 require that all transmissions be repeated by the employee receiving them, and employees must not take action until they are certain that all conversations have been heard, understood, and acknowledged. FRA's review of radio communications revealed that the EIC failed to comply with the procedures of NORAC Rule 705 and 49 CFR Part 220.35. The review also revealed that the Dispatcher and the EIC both failed to comply with NORAC Rule 140 and 49 CFR Part 214.323, regarding repeating permission and confirmation before foul time becomes effective.

### **Training**

The ET employees involved had recently (within 30 days) attended an annual re-certification class for Roadway Worker Protection (RWP) and Norac Operating Rules. All displayed proficiency by passing an exam. Any question not answered correctly on the exam was reviewed with the individual. The class lasted approximately six hours. The instructor's manual for the RWP re-certification class (102 pages) was supplemented with a power point presentation with the same number of slides. Four of the slides were on foul time requirements and covered the procedure. Two of the slides were on job briefings; the second depicted a copy of the SEPTA job briefing documentation sheet that must be filled out by the EIC and signed by all participants. Four slides were on proper radio/telephone usage. One of the four slides contained radio transmission and reception procedures. This slide stated to repeat all transmissions that could affect the safe operation of train movements and make sure all communications were understood.

The annual NORAC operating rules re-certification program for the Operators and Dispatchers follows a similar course line as the training for the ET department. The instructor manuals cover the rules for foul time and proper radio/telephone procedures. The procedure emphasizes the necessity for repeating the permission to foul, giving track designation, track limits, and time limits before foul time becomes effective.



FRA's investigation revealed that SEPTA only required that a recorded examination be used as a method of qualifying a roadway worker to become an EIC. The EIC stated that he was never trained in the field by a supervisor, nor did he demonstrate his ability and understanding of the duties of an EIC. The EIC performed his duties as shown by his peers and past practice, not by the training received. This employee has been the EIC for approximately one year and had only obtained foul time approximately four times.

### **Accepted Practices**

As revealed during the interviews and the review of audiotapes from March 26 and 28, adherence to the rules was not consistent or enforced on a regular basis. In his second interview, the EIC stated job briefings were not performed. The EIC Supervisors would assign jobs without discussing RWP. The EIC acknowledged being trained on his responsibility to perform job briefings, but to his knowledge never received or gave one.

The recorded tapes of the radio communications revealed that compliance with Federal and SEPTA radio rules was not enforced. On March 26, 2002, the Operator at Wind Tower granted foul time without the receiving employee repeating the permission and being confirmed by the Operator. Also revealed was the lack of required radio key words to end radio transmissions.

### **Compliance Testing Program**

The investigation revealed that SEPTA had a compliance testing program. This program met the requirements of CFR 49, Part 214.303, requiring a procedure to monitor the RWP program. The requirements for monitoring each management position were determined by the respective departments.

Analysis of the data from their program showed that the four employees directly involved in the accident had been observed 18 times in a 15-month time frame from January 2001 through March 2002. Eleven of the observations were performed at headquarters locations. Only three of the 18 observations pertained to RWP rules. All of the 18 observations were recorded as in compliance.

The EIC was observed three times in the 15-month period. Two observations on the EIC were for compliance with Rule G (Drug and Alcohol) during his annual RWP/NORAC Operating Rules class. His other observation was for compliance using personal protective equipment. He was never observed for safety-sensitive rules dealing with radio procedures, RWP, or NORAC operating procedures.

### **Other Findings**

The autopsy report listed the cause of death as head injuries.

The SEPTA Safety Department conducted an internal investigation of the accident. They determined the cause to be "procedures for operating/using equipment not followed."

The Hours of Service employees, Engineer, Conductor, and Dispatcher, were tested under FRA's required post-accident toxicological testing. The three ET employees were tested under FRA's post-accident toxicological testing. The victim was tested as a fatality under FRA regulations. All tests were negative for drugs and alcohol.

## **APPLICABLE RULES**

### **SEPTA Roadway Worker Protection Manual**

#### **C SRW 3 General Responsibilities of Individual Roadway Workers**

Roadway workers must follow the on-track safety rules and procedures. Do not foul a track except when necessary for the performance of duty. Make sure on-track safety is being provided before fouling a track.

#### **C SRW 5 Job Briefings**

A Job Briefing Documentation Sheet, SEPTA Form F-1454 must be completed by the employee-in-charge and signed by all participating in the job briefing.

#### **C SRW 15 Designated Employee-In-Charge**

The employee-in-charge is responsible for a safe operation and must exercise every reasonable precaution to provide protection.

#### **C SRW 17 Conduct a Job Briefing**

The employee-in-charge must conduct a job briefing as prescribed by the operating rules before any track is fouled. The job briefing is not complete until all employees acknowledge an understanding of the on-track protection procedures being used.

#### **C SRW 19 Roadway Work Groups (Designation of Employee Responsibility for providing On-Track Protection)**

The designated employee must be qualified on the operating and safety rules and procedures. Also, the employee must be qualified on the physical characteristics of the territory where protection will be provided.

#### **C SRW 54 Controlled Tracks**

Trains must be fully protected against any known condition that may interfere with their safe passage. 2. If the work will not disturb the track or catenary structure, the Dispatcher may verbally authorize foul time in accordance with Rule 140, Form D, lines 4 and 5, and foul time may be issued to employees who are qualified on the operating rules and physical characteristics of the territory involved.

C **SRW 56 Foul time**

Whenever foul time is authorized, the following procedures will apply: **b. Permission to Foul:** Permission to foul the track must include the following information: track designation; track limits (between/at); and time limits. The receiving employee must repeat this permission and the Dispatcher or Operator must then confirm it before the foul time becomes effective.

**SEPTA NORAC Operating Rules**

C **Rule 4 Job Briefings**

When reporting for duty, employees whose duties require coordination with other employees must hold a job briefing to review operational and safety conditions. If these conditions change, employees must hold an additional job briefing to discuss the new conditions.

C **Rule 140 Foul time**

Foul time may be issued only by the Dispatcher or Operator when authorized by the Dispatcher. **b. Permission to Foul** Permission to foul the track must include the following information: track designation; track limits (between/at); and time limits. The receiving employee must repeat this permission, and the Dispatcher or Operator must then confirm it before the foul time becomes effective.

C **Rule 702 Requirements for Track Cars and Roadway Workers**

Each employee assigned to provide on-track safety for roadway workers and each lone worker must have immediate access to a working radio. When access to a working radio is not available, the employee must be within hearing range of a radio capable of monitoring transmissions from train movements in the vicinity.

C **Rule 705 Radio Transmission and Reception Procedures**

All transmissions must be repeated by the employee receiving them. Employees must ensure that radio contact with the proper person has been made and must not take action until certain that all conversations with them has been heard, understood and acknowledged. Any radio communication that is not fully understood or completed in accordance with the requirements with these rules shall not be acted upon and should be treated as though not sent.

C **Rule 706 Radio Location and Monitoring**

When their duties involve the use of radio, employees must have the radio on and tuned to the proper channel at all times. The volume must be adjusted so that all transmissions can be heard.

C **Rule 708 Radio Messages and Code Words**

Communications must be as brief as possible and must use these key words: "ROGER," "OVER," "OUT," and "EMERGENCY."

**SEPTA Safety Rules**

C **3801**

The following procedures will govern identification and content of messages when using radio. Communications must be as brief as possible using these key words: "ROGER," "OVER," and "OUT."

C **3804**

Equipment and fixed points when equipped with radio and attended, must have a radio on and tuned to the proper channel at all times, with the volume control adjusted to ensure reception of all calls.

C **3805**

Employees must ensure being in communication with the proper persons and must not take action until certain that all conversations concerning them has been heard, understood, and acknowledged.

C **3806**

Any radio communication which is not fully understood or completed in accordance with the requirements of these rules, shall not be acted upon and shall be treated as though not sent.

**49 CFR Part 214 Roadway Workplace Safety**

C **214.313 Responsibility of Individual Roadway Workers**

- (a) Each roadway worker is responsible for following the on-track safety rules of the railroad upon which the roadway worker is located.
- (b) A roadway worker shall not foul a track except when necessary for the performance of duty.

- (c) Each roadway worker is responsible to ascertain that on-track safety is being provided before fouling a track.

**C 214.315 Supervision and Communication**

- (a) When an employer assigns duties to a roadway worker that call for that employee to foul a track, the employer shall provide the employee with a job briefing that includes information on the means by which on-track safety is to be provided, and instructions on the on-track safety procedures to be followed.
- (b) A job briefing for on-track safety shall be deemed complete only after the roadway worker has acknowledged understanding of the on-track safety procedures and instructions presented.
- (c) Every roadway work group whose duties require fouling a track shall have one roadway worker designated by the employer to provide on-track safety for all members of the group. The designated person shall be qualified under the rules of the railroad that conducts train operations on those tracks to provide the protection necessary for on-track safety of each individual in the group. The person may be designated generally, or specifically for a particular work situation.

**C 214.319 Working Limits, Generally**

Working limits established on controlled track shall conform to the provisions of 214.321 Exclusive Track Occupancy, 214.323 Foul Time, or 214.325 Train Coordination. Working limits established on non-controlled track shall conform to the provisions of 214.327 Inaccessible Track. Working limits established under any procedure shall, in addition, conform to the following:

- (a) Only a roadway worker who is qualified in accordance with 214.353 of this part shall establish or have control over working limits for the purpose of establishing on-track safety.

**C 214.323 Foul time**

Working limits established on controlled track through the use of foul time procedures shall comply with the following requirements:

- (b) Each roadway worker to which foul time is transmitted orally shall repeat the track number, track limits, and time limits of the foul time to the issuing employee for verification before the foul time becomes effective.

**C 214.335 On-track Safety Procedures for Roadway Work Groups**

No employer subject to the provisions of this part shall require or permit a roadway worker who is a member of a roadway work group to foul a track unless on-track safety is provided by either working limits, train approach warning, or definitive train location in accordance with the applicable provisions of 214.339, 214.321, 214.323, 214.325, 214.327, 214.329, and 214.331 of this part.

**C 214.343 Training and Qualification, General**

(a) No employer shall assign an employee to perform the duties of a roadway worker, and no employee shall accept such assignment, unless that employee has received training in the on-track safety procedures associated with the assignment to be performed, and that employee has demonstrated the ability to fulfill the responsibilities for on-track safety that are required of an individual roadway worker performing that assignment.

**C 214.353 Training and qualification of roadway workers who provide on-track safety for roadway work groups**

(a) The training and qualification of roadway workers who provide for the on-track safety of groups of roadway workers through establishment of working limits or the assignment and supervision of watchmen/lookouts or flagmen shall include, as a minimum:

(4) The relevant physical characteristics of the territory of the railroad upon which the roadway worker is qualified.

**49 CFR Part 220 Radio and Wireless communications Procedures**

**C 220.035 Ending a transmission**

- (a) At the close of each transmission to which a response is expected, the transmitting employee shall say "Over?" to indicate to the receiving employee that the transmission is ended.
- (b) At the close of each transmission to which no response is expected, the transmitting employee shall state his identification followed by the word "Out" to indicate to the receiving employee that the exchange of transmissions is complete.